Homelessness Among People Living with HIV/AIDS in King County

Background

Nearly 1.56 million people used an emergency shelter or a transitional housing program during the 12-month period (October 1, 2008 through September 30, 2009) and 671,859 people experience homelessness on any given night in the United States.[1] The National Alliance to End Homelessness estimates that 3.4% of homeless people were HIV positive in 2006, compared to 0.4% of adults and adolescents in the general population.[2] It is unclear what impact homelessness has on clinical outcomes and overall health for people living with HIV/AIDS (PLWHA). Some studies have shown homelessness among PLWHA is associated with delayed and poorer access to medical care, decreased likelihood of receiving optimal antiretroviral therapy, poorer adherence to therapy, lower CD4, and higher HIV viral.[3-7] Homeless PLWHA who enter stable housing have better engagement in medical care, improved health outcomes, and reduced risk behavior.[8] A recent study in three large U.S. cities found a reduction in self-reported opportunistic infections in both people with and without stable housing and a significant overall improvement in self assessed physical health.[9] However, similar changes were not observed for viral load or CD4 count. The study did show that participants who were homeless one or more nights in the prior six months were significantly more likely to have a detectable viral load compared to those who had not experienced homelessness. In this article, we look at key indicators related to homelessness in PLWHA in King County.

Methods

Three different contemporary data sources were examined to look at factors related to homelessness among people living with HIV in King County. The data sources were the HIV/AIDS Reporting System (HARS), the 2009 Ryan White Consumer Care Needs Assessment (CNA) and data from the 2005-2009 Medical Monitoring Project (MMP). In addition, staff from Public Health Seattle-King County (PHSKC) interviewed 25 case managers in King County in an effort to get a more detailed picture of the number of PLWHA dealing with homelessness or the threat of homelessness.

Several key indicators were examined in each data source, including demographic variables such as age, race, gender, income, country of origin and preferred language. In addition, people living with HIV who were identified as homeless through the data sources listed above were stratified by mental health diagnoses, drug use and history of incarceration. Medical outcomes were also considered, including current use of highly active antiretroviral therapy (HAART), recent CD4 and viral load test results, number of visits to an HIV care provider, and adherence to HAART. A summary of the findings are presented below.

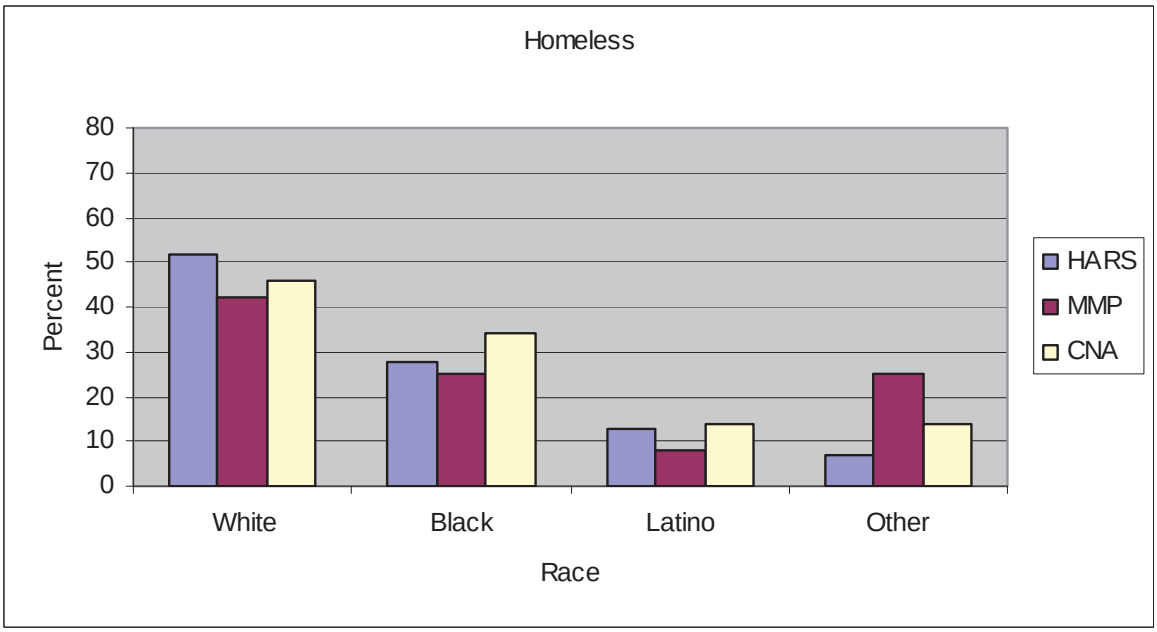
Results

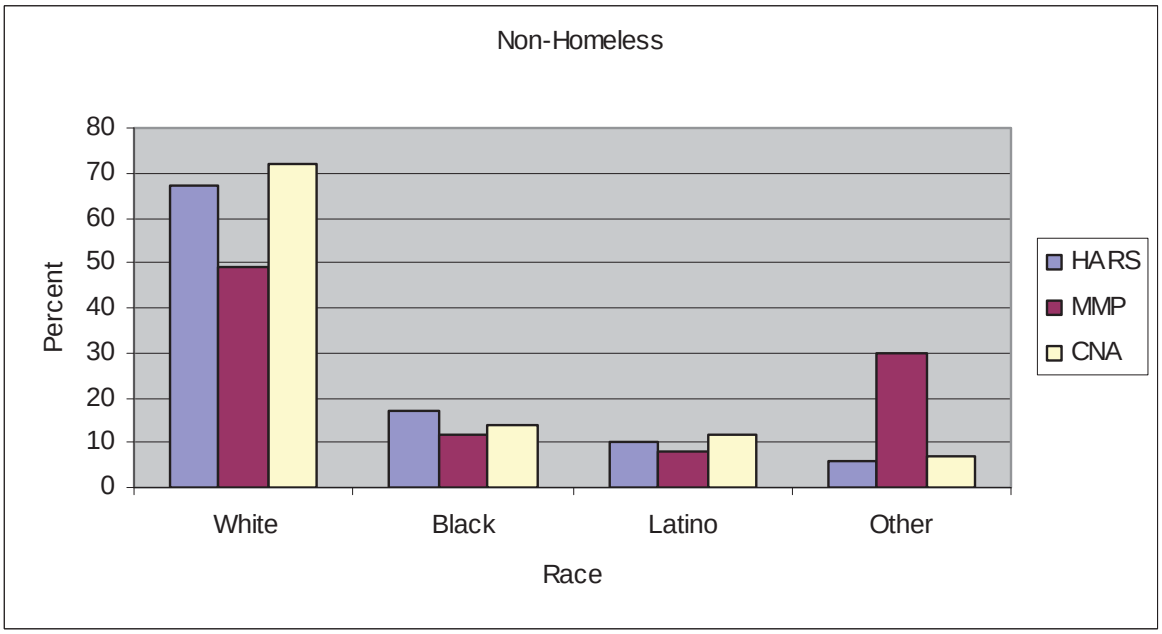
In HARS, 142 people living with HIV (PLWH) were documented as homeless. Because homelessness in HARS is defined as having no residence at time of the HIV or AIDS diagnosis, this definition undercounts the number of homeless HIV/AIDS cases not only due to ascertainment at a single point in time, but if, for example, a shelter or a friend's home was reported as the residence. Two percent (2%) of the 6,687 King County residents living with HIV or AIDS were reported as homeless at the time of diagnosis.

In the CNA, 50 (8%) respondents indicated that they had been homeless (no permanent address) at any point in the last 12 months. In MMP, 60 (12%) participants reported that they were homeless in the last 12 months, with homeless defined as living on the street, in a shelter, in a single room occupancy, or in a SRO hotel, temporarily staying with friends or family (not in 2009 definition) or living in a car.

Race: Both the HARS data and the CNA data showed a significant association between homeless status and non-White race among HIV-infected individuals (**Figure 1**). The HARS data also showed an association between homeless status and Latino ethnicity. The CNA found that homeless respondents were more likely to be American Indian/Alaska Native. All three data sources showed a significant association between homeless status and being African American.

Figure 1. Racial/ethnic distribution of homeless and non-homeless individuals in the Medical Monitoring Project (MMP) 2005-2009; Ryan White Consumer Care Needs Assessment (CNA) 2009, and individuals presumed living from the HIV/AIDS Reporting System (HARS) as of 6/30/2010



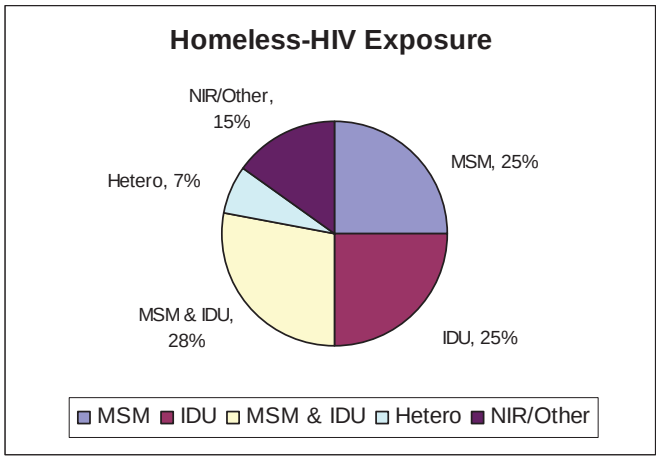


HIV exposure category (data from HARS): The homeless group was significantly less likely to be comprised of men who have sex with men (MSM) and more likely to include injection drug users (IDU), IDU/MSM, heterosexuals or those with no identified risk (NIR) as their HIV exposure category (**Figure 2**).

Country of birth: HARS data showed that homeless people with HIV were more likely to be born in Mexico compared with non-homeless people (**Table 1**).

Income: Both the CNA and MMP found that homeless people were more likely to be low income [less than 100% Federal Poverty Level or FPL(CNA) or report an annual salary of <$10,000 (MMP)] relative to non-homeless individuals. Since those individuals with low income are at the greatest risk of becoming homeless, we also stratified the data by low income. When the CNA data was stratified by those below and above the 200% FPL, those below the 200% level were more likely to be born outside the United States, be homeless, have a history of mental illness, have been in jail in the last 12 months, and report using injection drugs in the last 12 months. Those below the 200% FPL were also more likely to have been diagnosed with AIDS and have a most recent CD4 count <200 cells/μL (**Table 2**). Among the MMP participants, those who reported an annual income of <$30,000 were more likely to be female, African American, homeless, not list English as their primary language, report a mental health illness diagnosis in the last 12 months, report injection drug use in the last 12 months, have been incarcerated in the last 12 months, and have received or needed drug or alcohol counseling or treatment. Those making less than $30,000 were also more likely to report that their lowest CD4 count had been <200 and were less likely to have their most recent viral load be undetectable (**Table 3**).

Figure 2. HIV risk categories of homeless and non-homeless individuals presumed living from the HIV/AIDS Reporting System (HARS) as of 6/30/2010



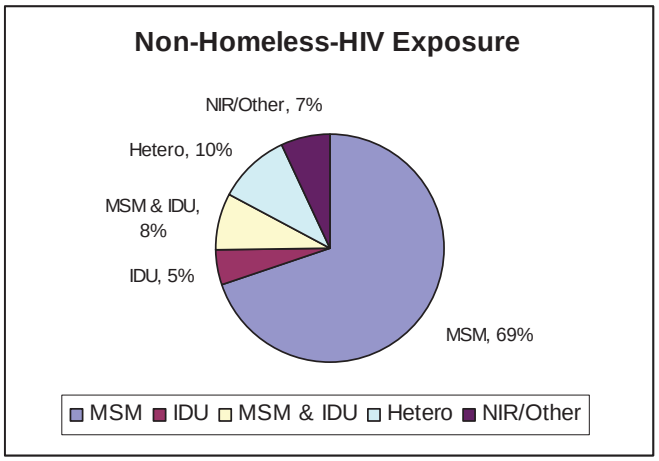


Table 1. King County residents living with HIV or AIDS and presumed homeless from the HIV/AIDS Reporting System (HARS) as of 6/30/2010

Country of Birth	Homeless N=142		Non-Homeless N=6,687	
USA	117	84%	5,310	80%
Mexico	11	8%	253	4%
Other/Unknown	14	8%	1,124	16%

Table 2. Key sociodemographic and clinical characteristics of people living with HIV from the Ryan White Consumer Care Needs Assessment 2009, N=627*

	<200% FPL N=465	>200% FPL N=162	P Value
Born in the USA	82%	90%	P<.05
Homeless	10%	1%	P<.05
AIDS	55%	32%	P<.05
Most recent CD4 <200	38%	26%	P<.05
Mental illness diagnosis ever	47%	32%	P<.05
Jail or prison last 12 months	6%	1%	P<.05
IDU last 12 months	8%	2%	P<.05

*17 participants missing income information

Table 3. Key sociodemographic and clinical characteristics of people living with HIV from the King County Medical Monitoring Project (MMP) 2007-2009, N=392

	<$30,000 yearly household income before taxes N=261	≥ $30,000 yearly household income before taxes N=131	P Value
African American	15%	5%	P<.05
Female	15%	4%	P<.05
Homeless	17%	1%	P<.05
English primary language (2009 only, N=140)	80%	96%	P<.05
Mental health illness diagnosis-last 12 months	44%	30%	P<.05
Injection drug use last 12 months	13%	5%	P<.05
Received or needed drug or alcohol counseling or treatment (2009 only, N=140)	29%	6%	P<.05
Jail or prison last 12 months	9%	1%	P<.05
Lowest ever CD4 <200	48%	35%	P<.05
Most recent viral load undetectable	57%	71%	P<.05

Mental health: As above, the CNA data showed that homeless individuals were more likely than non-homeless individuals to report ever having a mental health illness diagnosis. Homeless respondents in MMP were statistically more likely to report being diagnosed with psychosis in the last 12 months (data not shown due to small cell sizes). It should be noted that the MMP data may not show any other statistical associations between mental health and being homeless, because the survey asks about recent (last 12 months) mental health illness diagnosis and the numbers of participants with a recent mental health illness diagnosis are small.

Figure 3. Incarceration status of homeless and non-homeless individuals in the Medical Monitoring Project (MMP) 2005-2009 and Ryan White Consumer Care Needs Assessment (CNA) 2009

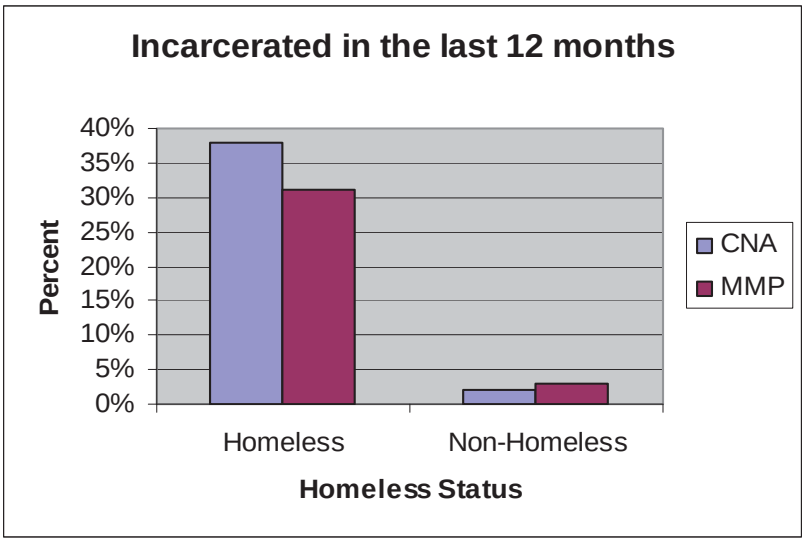


Table 4: Drug use and drug treatment for people living with HIV from the King County Medical Monitoring Project (MMP) 2005-2009, N=504

	Homeless N=60	Not Homeless N=444	P Value
Injection drug use last 12 months	32%	8%	P<.05
Non-injection drug use last 12 months	48%	24%	P<.05
Received or needed drug or alcohol counseling or treatment (2009 only, N=140)	60%	14%	P<.05

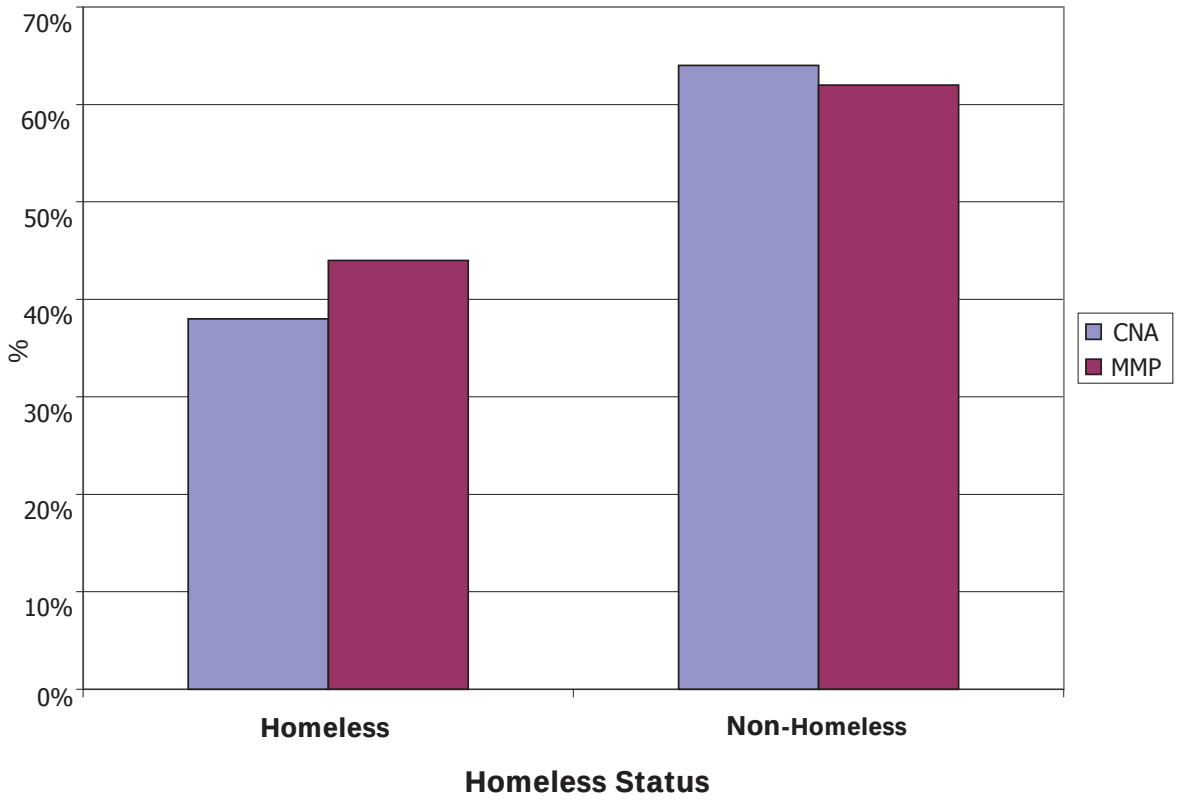
Table 5: Drug use and drug treatment for people living with HIV from the 2009 Ryan White Consumers Care Needs Assessment, N=644

CARE NEEDS ASSESSMENT 2009, N=644	Homeless N=50	Non-Homeless N=594	P Value
Substance abuse treatment last 12 months	24%	4%	P<.05
Injection drug use last 12 months	20%	5%	P<.05
Drugs used last 12 months			
Crystal	26%	8%	P<.05
Heroin	12%	1%	P<.05
Cocaine	44%	7%	P<.05

Incarceration history: Both the CNA and MMP found that homeless individuals were more likely to report that they had been incarcerated in the last 12 months (**Figure 3**).

Substance abuse: HARS data showed that homeless individuals are more likely to have IDU or MSM/IDU as their exposure category. Both CNA and MMP data show that homeless are more likely to report IDU in the last 12 months and are more likely to report use of other illicit drugs (non-injection) in the last 12 months (**Table 4**). The CNA found that homeless respondents were more likely to report having gone to substance abuse treatment in the last 12 months. MMP found that homeless participants were more likely to report having received or needing drug or alcohol counseling or treatment in the last 12 months (**Table 5**).

Figure 4. Proportions with undetectable viral load by homeless and non-homeless status in the Medical Monitoring Project (MMP) 2005-2009 and Ryan White Consumer Care Needs Assessment (CNA) 2009



Clinical indicators: Both MMP and the CNA data sources showed that homeless people living with HIV were more likely to have their most recent viral load be at detectable levels compared with non-homeless participants (**Figure 4**). There was no association between being homeless and CD4 counts found in MMP, but the most recent CD4 count was more likely to be <200 among the homeless participants in the CNA. MMP found that homeless individuals were less likely to currently be on HAART and they were more likely to report zero visits to their primary HIV provider in a four month period.

Summary of case manager interviews

In July 2010, staff from PHSKC conducted phone interviews with 25 case managers representing eight different agencies in King County. The caseloads for all 25 case managers combined was 2,319 clients, which is over one-third of all clients living with HIV/AIDS in King County.

Case managers reported that 424 of their clients (18%) need housing assistance and 477 (21%) need a rent subsidy or housing voucher to maintain their current permanent housing. Case managers stated that 212 (9%) clients are currently homeless and all but one case manager reported having at least one currently homeless client. The case managers reported that 207 (9%) of their clients were at risk of becoming homeless. Most clients that needed housing assistance needed placement into the following types of housing:

- independent permanent housing (n=201)
- transitional independent housing (n=192)
- transitional housing with on-site supported services (n=164)
- permanent housing with on-site supportive services (n=149)
- emergency shelters (n=114)

Conclusion

For people living with HIV in King County, homelessness is associated with non-White race, history of mental illness, incarceration, substance use and low income. When we looked at several health, behavioral, and socioeconomic indicators stratified by income, several key factors (i.e. substance use, mental illness, and incarceration; similar to the ones found for homeless individuals) were significantly associated with low income. Clinically, homeless individuals with HIV are more likely to have a detectable viral load. MMP found that homeless patients were less likely to be on HAART and more likely to report zero visits to their primary HIV provider in a four month period. Data from these three existing data sources suggest that homeless people living with HIV in King County are dealing with several other factors in addition to being homeless. All these factors can potentially contribute to poor health outcomes for these individuals.

- *Contributed by Elizabeth Barash*

[1]2009 Annual Homeless Assessment Report to Congress— http://portal.hud.gov/portal/page/portal/HUD/press/press_releases_media_advisories/2010/HUDNo.10-124 (last accessed September 14, 2010).
[2]National Coalition for Homelessness-HIV/AIDS and Homelessness http://www.nationalhomeless.org/factsheets/hiv.html (last accessed September 14, 2010).
[3]Kidder DP et al. Healthstatus, health care use, and medication adherence in homeless and housed people living with HIV. Am J Public Health.2007;97:2238–45.
[4]Leaver CA et al.. The effects of housing status on health-related outcomes in people living with HIV: a systematic review of the literature. AIDS Behav 2007;11(6 Supp):85–100.
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[6]Aidala AA et al. Housing need, housing assistance, and connection to HIV medical care. AIDS Behav 2007;11(6 Supp):101–15.
[7]Royal SW et al. Factors associated with adherence to highly active antiretroviral therapy in homeless and unstably housed adults living with HIV. AIDS Care 2009; 21:448–55.
[8]Aidala A et al. Housing status and HIV risk behaviors: Implications for prevention and policy. AIDS Behav 2005;9:251–65.
[9]Wolitski RJ et al. Randomized Trial of the Effects of Housing Assistance on the Health and Risk Behaviors of Homeless and Unstably Housed People Living with HIV. AIDS Behav 2010; 14:493–503.